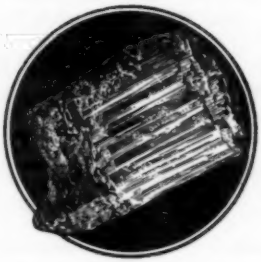
ASBESTOS

Vol. 2 **JUNE, 1921** **No. 12**



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PUBLISHING OFFICE
721 BULLETIN BUILDING
PHILADELPHIA, - PENNSYLVANIA
London Office - 2nd Floor, 86-88 Wardour St., W. I.

Volume II | JUNE 1921 | Number 12

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SUBSCRIPTION PRICE

U. S. AND CANADA	$1.00 PER YEAR
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THERE ARE TWO KINDS OF BUSINESS MEN

By ALBERT T. REID

DARN'D IF I'LL SPEND ANY THING TO BE PULLED OUT - I'LL STAY HERE TILL THE ROAD IS DRY
NOW WE'RE GETTING OUT!
ENERGY
MANUFACTURING
BUSINESS
BUSINESS DEPRESSION
Albert T. Reid

Reprinted from New York Evening Mail.

In your opinion, does either of these machines look like the Asbestos Industry?

Past and Present Methods of Mining

By Walter A. RuKeyser, B. Sc., E. M., Mining Engineer and Geologist

Mr. Rukeyser in this, the second, of the series of articles he has prepared for us, discusses the various kinds of mining machinery used since Asbestos was first discovered in Canada, and tells us the reason for the use in some of the workings, of what might be regarded, by the uninitiated, as primitive methods.—The Editor.

Past Methods of Mining: The pit in former times was usually started by means of swinging boom derrick and boxes. The boxes used today in most of the Thetford operations are substantially the same as those used at the beginning some forty years ago,—tho the capacity has been considerably increased. They hold about a ton of rock and are supported by three or four chains which apex at a suspending ring. The dumping is effected by unhooking at the front, the two rear chains remaining fixed, whereupon the hoisting rope is tautened, the box overbalanced and the contents spilled. The rock was drilled by either single or double hand labor or by the use of slow, heavy tripod drills of the reciprocating piston type. Steam was the usual actuating power,—and under the rigid conditions of Quebec winters caused considerable difficulty and inefficiency of operation. The larger masses of rock which were blown down would be broken smaller by arduous use of sledge hammers or reblasting. The "crude" would be cobbed from the rock and sacked in the pit itself,—the waste material being loaded into the boxes, hoisted by hand windlass or small steam hoist,—swung to the surface by the derrick and dumped at the edge of the pit. This habit of dumping waste on the deposit with no thought of the future has necessitated rehandling at considerable expense during subsequent operations on a larger scale. Thus at the beginning, the mine plant of an asbestos operation consisted merely of one or more derricks, a hoisting device and possibly a steam drill with a boiler. The mine would be worked solely for the crude and milling had not yet become justified.

When these pits became thirty or forty feet deep and

had, in the search for the most productive rock, assumed larger areal proportions,—the derrick ceased to be a practical method of handling. It was then that the cableway was employed. This permitted working over a distance many times greater longitudinally than had been the case with the simple derrick,—tho the lateral operations were still restricted to the possible swing of the box. To thus develop the pit laterally as well as longitudinally two or more cableways were resorted to,—and it is this method of

After stripping has been completed the pit is often started by means of a swinging boom derrick, while the steam shovel (at extreme left of picture) is cutting its way into the ore body.

operation which we still find in greatest vogue on the Thetford type of deposit. Even in respect to detail, there has been little change in the actual pit operation,—and any marked advance has been one of plant equipment, layout and administration.

A cableway consists essentially of a fixed or "track" cable, a carriage running on this cable, a hauling or "traction" rope to move the carriage back and forth along the main cable, a hoisting or "fall" rope to raise and lower the load by pulleys suspended from the carriage, and finally two end towers for the support of the track cable. A steam or electric hoist is placed at one end for operating the hoisting and hauling ropes. The usual carriage has two wheels with a set of hoisting sheaves below which are

1. *Drilling a down hole. Note angle of hole and also the distance from face of pit.*
2. *Headplane and bins at surface of shaft and in connection with hoisting in glory hole mining.*
3. *Beginning a new bench. Open Pit mining deposit by cableway.*
4. *Steam shovel operating in pit.*
5. *Open pit mining with steam shovels on slip fibre deposits. The footwall of the serpentine "sill" is permanent and shows the angle of "dip" (about 65o).*
6. *Open pit mining by cableway. Note in foreground thin wall of rock left standing to separate one Company's workings from another's.*

similar to a like pair constituting the "fall block." This fall block contains a pair of sheaves to supply the necessary leverage and to it is attached the hook which supports the box. In the old types no provision was made to prevent the hoisting rope from sagging between the carriage and the head tower,—and this was a constant source of danger to those below.

Open pit Mining by means of single cableway. The cableway shown here represents the simplest, primitive type and illustrates comparatively small scale mining, following the abandoning of the swinging boom derrick.

The crude would be cobbed in the pit as before, the boxes swung to the place of working and loaded with the waste rock. This handling of the asbestos rock by means of cableways persists to the present day and we find that the foregoing operations constitute essentially the method which is typical of open-pit mining the cross-fibre deposits. This brings us to present-day conditions,—conditions which find the industry at the beginning of a new era necessitating the introduction of new methods.

PRESENT METHODS OF MINING:

Before describing the most recent methods of mining, the question naturally arises as to what constitute the conditions which are bringing about the changes. In the first place, the industry is enjoying a hitherto unrivaled prosperity. This has resulted in the accumulation of surplus

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which permit of costly experimentation and "dead" development work. Secondly,—the open pits may be reaching depths near the safe and practicable limit to open cut mining,—and this is especially true of those mines, whose property holdings are hemmed in by other operations. Long, narrow pits cannot be carried to too great depths without fear of caving in of the walls. Thirdly, during the past decade or so the industry has been attracting a technically trained type of operator who is capable of carefully planning future operations with a maximum of forethought and who is introducing the experience of other fields into the asbestos operations. Lastly, with the already advanced stage of development of the open pits, the severe winter conditions of the Quebec district is interfering more and more with economical continuity of operations. A loss of crew due to the inability to keep them employed means a big operating loss,—and 12 months working is essential. In view of these considerations, we find to-day a distinct trend toward the application of combined or underground metal-mining methods and the most recent development has been with that end in view. One of the largest producers is to-day turning out its entire output from such workings.

Present-day operations differ essentially in the "cross-fibre" (Thetford type) and "slip-fibre" (Broughton type) deposits. Wherever cross-fibre,—or rather crude,—is mined, the controlling feature of any method is that the entire mass of broken rock must be fine-combed for the crude before being sent to the mill. The slip-fibre deposits, on the other hand,—do not necessitate such handling, for these are essentially low-grade "tonnage" propositions in which the entire output of the mine goes direct to the mill.

The methods by which asbestos is now mined may be broadly classified as follows:

(1) open pits, (2) "glory holes" and underground stopes, (3) combined open and underground workings. In the open-pit operations involving the handling of crude we find the cableway surviving thruout the life of the industry. The pit is carried in benches varying from twenty to as much as seventy-five feet in height,—with a usual average of forty. In blasting down the rock the modern tendency seems decidedly toward the use of the lighter type drills and where holes were formerly drilled to only 12 or 16

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feet, recent day economy has proved the efficacy of much deeper holes. A series of these,—which in extreme cases may be 35 ft. deep,—are put down nearly vertically at a distance of 15 to 30 ft. from the face, depending upon the character of the rock and the results desired. "Lifters" are then put in at a slight angle to the horizontal and at the toe of the bench. The holes are loaded and the entire series detonated. Any large boulders resulting from the "shot" are re-blasted. This is called "block-holing." or "mud-capping," as the case may be. It is then usual to begin the search for and the hand-cobbing of the crude on the spot. This first, or rough cobbing, rids the veins of asbestos of the majority of the adhering rock. The final cobbing is done,

Final cobbing—generally done by girls.

usually by girls, on the surface in suitably designed sheds and it is here that the final separation of the remaining rock from the crude is made. In one of the mines, the run-of-mine rock with the refuse is run over slowly moving conveyor belts for further hand-picking. The product is sorted as to length and quality and bagged for shipment.

After the sorting on the floor of the pit or benches,—the rock which constitutes the mill-feed is shoveled into the boxes. These boxes have now been developed so as to hold as much as ten tons and are handled with ease by the modern high-powered hoists. The load is raised and run along the cableway to hoppers or bins where it is dumped. These

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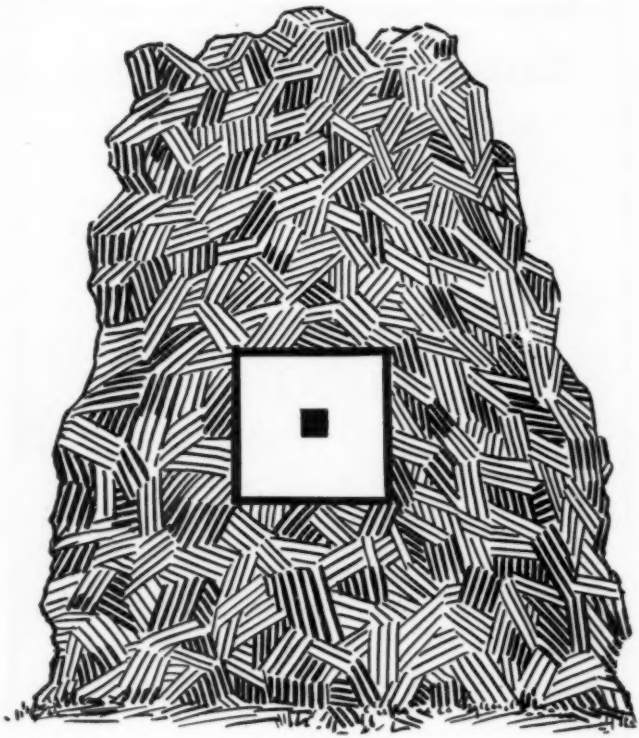

Showing the relation of rock mined to actual production of Crudes and Fibres

The large mountain of rocks represents the rock mined in Canada during 1920, in order to produce the Asbestos Crudes, represented by the small black square, and the Asbestos Fibres, represented by the large white square.

The actual figures of production are:

Rock Mined - - -	3,099,122 tons
Crudes produced - -	3,853 tons
Fibres (including mill, shingle, paper stock, refuse and sand) - -	186,896 tons

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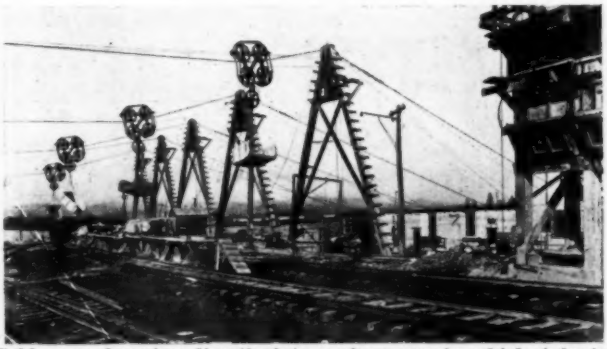
hoppers feed,—thru suitable chutes, narrow-guage railroad cars holding from 5 to 10 tons. The cars are assembled into trains and dumped at the storage bins. The larger mines handle as much as 1000 tons per ten hour shift in this manner, the system permitting of great flexibility and especially so when coupled with large storage capacity. This, in one of the largest mines, is about 25,000 tons.

The newer cableways, handling the heavier loads, are provided with fall-rope carriers which are distributed along the cables between the carriage and the head tower. These are spaced either by chains hanging in loops or by a series of "buttons" which pull the carriers off the carriage-



Cableways dumping directly into surface cars in which Asbestos bearing rock is taken to mill bins or waste sent to dump.

horn and thus eliminates the danger from the sag and whip of the fall-rope to those working below. Improvements have also been made in tower construction and electric hoists are nearly everywhere used instead of steam. The spans may be anything up to 1500 feet, while those of 600 to 1000 feet are usual.

In a second type of open pit mining the rock is drawn off to the mill at the level of the pit-floor, and the cableways are used for lowering the boxes from the benches or for picking up the loads and dumping direct into the tramcars. The trains are made up at the bottom of the pit and hauled out on suitable grades either by means of a hoist or by locomotives. Recently one of the big mines has substituted electric haulage on the surface for steam, as the

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latter is particularly inefficient during the severe Canadian winters.

From 30 to 60% of all the rock handled may be "dead" or barren rock and is not fed to the mill. This must be sent to the rock-dump as waste. Large cranes are in some instances used to sort and handle the boxes of mill and "dead" rock. From the above one gets an indication of the large amount of material which must be mined, sorted and "wasted" to get one ton of crude,—the asbestos totalling but from 3 to 10% of the entire rock-mass (See graph on page 13). This method which eliminates hoisting the major portion of the ore is adaptable where topography and possible hauling grade permits. The mill is usually located below the level of the pit-floor in such operations,—and the conditions which exist at Black Lake lend themselves admirably to this system.

The supporters of open-pit methods claim for their methods: no skilled labor required,—no timber used (which some maintain may contaminate the mill-feed) no expensive shafts, pockets, stations, underground haulage, etc., to be driven and maintained,—and it is further said that a better separation of the crude can be effected. On the other hand, the supporters of underground mining methods claim for their system: twelve months continuity of operation, a simplicity of haulage eliminating hoistmen, tenders, etc., no waste of men's time due to necessity of watching the boxes overhead, no shoveling as in the open-cut mines, for in underground methods, everything may be dropped downward. It can be said, however, with some sort of finality, that the consensus of opinion is that open-pit methods are cheapest and best for shallow depths and the controversy only starts at that point.

Altho one or two of the Quebec mines have had underground workings for years,—and tho the Arizona deposits with their lesser persistence in depth have been tunneled upon and the rock taken out in stopes or rooms,—it has just been recently that one of the consistent big Thetford producers has turned out its entire tonnage by underground mining and shaft hoisting. In this instance a double compartment shaft had been driven 550 feet and a main level about 1500 feet under former open pit workings. From this level a series of cross-cuts 75 feet apart

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were branched out and raises from these cross-cuts driven to the surface. The rock is "glory-holed,"—that is, broken down in the open-pit or in large stopes and drawn down thru the raises and chutes into mine cars. These are assembled into trains in the main "drift" or haulage way, where they are picked up by storage-battery locomotives and hauled to the loading pocket at the shaft-station. The skips, which have a capacity of 2½ tons, are loaded from this pocket and hoisted vertically at high speed to the automatic dumping arrangement at the steel headframe above. The rock falls into bins whereupon the subsequent handling is in the main unchanged. The rock after having been transported to the surface is run over a slow-moving "picking-belt" when a further sorting out of the crude is effected.

The third main type of working,—the combined method,—is being developed at the Black Lake, Que., district. Here, in one case, a main haulage way has been driven at the level of the mill-bins into the hillside and under the present series of open pit workings. The rock is ultimately to be broken in the pits and "milled down," thence drawn off by electric locomotives to the mill rock-bins.

On the Broughton type of "disseminated" deposit where practically the entire rock mass goes to the mill,—and where no sorting of crude has to be done,—the steam shovel finds excellent application. The shovel, preferably of the caterpillar type,— loads the broken rock directly into the cars. These may be jogged back and forth between the working face and a crusher installation in the pit itself,—or may be hoisted up an incline out of the pit to the crusher on the surface. In the former case, the crushed ore is raised to the rock bins on the surface by means of long belt conveyors which run thru inclines driven from the surface to the pit bottom. One shovel may be made to handle as much as 800 or 1000 tons a day,—and it is by these "quantity basis" methods, involving a minimum of handling that the slip-fibre deposits are worked so successfully.

The third and last article of this series, Methods of Milling, will appear in the July number.

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Editorial Comment

A movement is in progress in New York under the head of "The Stable Money League" to stabilize the American dollar on a uniform purchasing unit basis. Just how it is proposed to do this is not disclosed. Professor Irving Fisher, of Yale University, suggests that in whatever proportion the price of labor and commodities rise or fall, the fluctuation shall be counteracted by a reverse rise or fall in the current price of gold.

This theory is splendid, but will it function in practice? Naturally the exaggerated prosperity of war times disrupts business. We experienced a depression after the Napoleonic Wars of 1818, the Crimean Wars of 1857, the Civil War of 1866, the Franco-Prussian War of 1873 and now after the Great World War. This is a natural sequence of which uncertainty is the chief cause. Uncertainty hurts business and paralyzes human effort.

It is impossible and unfair to expect immediate readjustment in business from a war time to a peace basis. Only Father Time can reconstruct the economic fabric from the war ruins, and the more steadily and uniformly such transformation takes place the better for business.

The National Association Against the Prohibition Amendment has established a local branch in Philadelphia.

One of the Vice Presidents of the local chapter is Dr. Richard V. Mattison.

It should be noted that this Association is not interested in the return of the corner saloon, but seeks the restoration of fundamental personal and home liberty guaranteed by the Constitution and ruthlessly taken from our people by a group of fanatics representing a small minority of the people.

Manufacturers are urged by government and public to reduce prices in the face of exorbitant taxes for federal government purposes, additional state taxes and inordinately increased freight rates. Public utility companies have also thrown increased rates for fuel, light and power

on the manufacturer. This attitude of government seems almost paradoxical.

Congress and the President should use discretion and judgment in their attitude toward business. An important factor would seem to be substantial assistance to the Railroads in revision downward of the wages paid railroad labor and the consequent reduction of freight rates.

"If a thing isn't fair, then it isn't right; and if it isn't right, it is wrong." Gengenbach.

Paul Hammerich

Inspector of Asbestos, Crude and Fibre. Reports on Asbestos Mines and Mills.

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Market Conditions

In Canada.

Late reports from Canadian mining fields indicate that but two or three producers are operating on full time. The great majority of the producing strength have cut working time and quite a few of the mine operators have reduced wages an average of 18%. This applies to East Broughton, Robertson, Black Lake, Thetford and Coleraine.

Prices quoted by producers on Crudes and Fibre remain firm there being little if any demand for raw material, owing to the general world business depression. As heretofore predicted, it is to be expected that the operators will conclude to leave the raw material in the ground until a better demand is established.

The Editor will visit mining centers early in June, and expects to make an interesting report on conditions in the July number of ASBESTOS.

Asbestos Textiles.

Practically no demand exists, at the moment, for textile products, except for steam packings.

It is apparent that when the automobile industry hit the slump, stocks of brake lining were fairly long, because the flurries of activity in automobiles have brought little call for brake linings. Some improvement in the garage trade is noted.

Regardless of our oft repeated statement that the spinning capacity of this country is more than ample, we still see new ventures being launched here, there and everywhere.

With improved sources of raw material supply, making a real scarcity of spinnable fibres most unlikely, we see ahead some tough competition in textiles. The late comers into this field will scarcely undertake to find new uses and markets for their output, hence it will be "dog eat dog" and a case of running about in a circle.

The possibilities of the Asbestos Industry have not been touched, but little is being done by the industry, either collectively or individually, to develop them. The greatest force available is advertising, and while one large manufacturer does advertise extensively, the advertising is

all for that manufacturer and takes no heed of the larger needs and possibilities of the industry.

If we could have a "Save the Surface" campaign, well managed, and fully supported, room for all could easily be made and the future of the industry would be assured.

Asbestos Paper and Millboard.

Factories are either working part time or are closed down, because of the slackness in the building trades.

Boston, Pittsburgh and Philadelphia are all having difficulties with labor in the building trades, and in the last two named new building is at a standstill.

Prices for paper and board have fallen in proportion to demand, while costs have decreased practically not at all.

This market is fully liquidated and any change at all will bring with it an upturn in price.

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Prices have declined to the point of vanishing profits and, as in the case of paper, an upturn in price will be the next move in the market.

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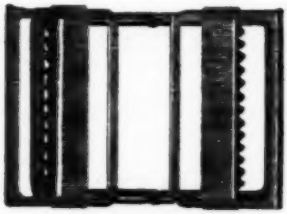
The Brake Lining Buckle

Brake Lining Manufacturers who are anxious to eliminate the waste entailed in the treating process will be interested in the Brake Lining Buckle illustrated at the top of this article.

For the information of our readers not familiar with the manufacture of Brake Lining, the long strips of brake lining in passing thru the treating and drying processes, are fastened together with wire, or riveted, in order that



the process may be continuous. Afterwards, to separate the strips the ends are cut off, resulting in a waste of several inches on each strip.

J. Posternock, 546 Common Street, Walpole, Mass., has designed and patented a brake lining buckle, for the express purpose of eliminating this waste.

The actual size of the buckle is 2 in. by 3 in. It is a very simple device as will be seen, and can be so quickly and easily attached to and detached from the strips of brake lining that much time, as well as material, is saved.

The pivoted joints in the center make it possible to swing in either direction, and the buckle when tried out in actual practice has given very great satisfaction.

A specimen buckle may be examined in the office of ASBESTOS, or if readers will write Mr. Posternock, he offers to supply several samples for experimentation purposes.

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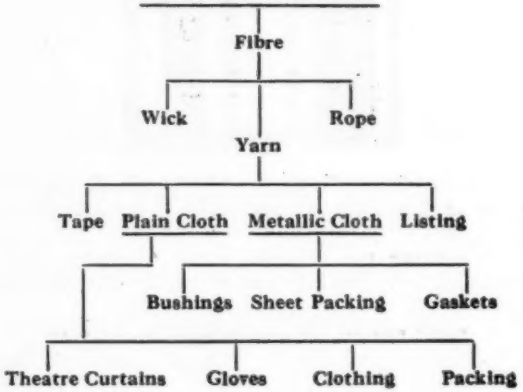


Compressed Asbestos Fibre Sheet Packing

"Quality and Service"

ASBESTOS TEXTILE CO.

INCORPORATED

MILLS
NORTH BROOKFIELD,
MASS.

GENERAL OFFICES
18 E. 41ST ST.,
NEW YORK

The German Asbestos Industry

Prior to the war, the German requirements of asbestos were chiefly imported, the largest quantity coming from Canada, and from Russia (Siberia). Supplies were also obtained from the United States and China, and South Africa (in the region of the Orange River).

According to the German press asbestos mines opened through German agency are: Veltlin (Italy), von Sterzing, Zillerthal, and the St. Gothard in the Tyrol, von Mantern in Steiermark, and in the Government of Perm, near Newjansk (Russia).

In addition, asbestos has also been found in Bulgaria and other Balkan States, and at Kustendil, which, however, through excessive decomposition, is of little value. New fields in Bosnia and Turkey are not of great value, owing to their recent establishment, and the discoveries of 1917 in Switzerland are not of great importance.

The oldest and best-known mines are those of Fundort Zoblitz i. Erzgeb. During the war recourse was had to deposits at Thuringen and in the Reusser Oberland, as well as at Kacholdberg von Lettinghammer, Heberndorf. These fields were known to the German mineral authorities before the war, but were not developed, owing to the favorable supplies of the imported article. War-time requirements, as necessitated by the blockade, led to the development of home supplies, with the result that these mines have been satisfactorily worked. Asbestos has also been found at Reichenbach i. Vgtl. and at Bad Steben (Krotenmuhle).

Although the huge demands of Germany for asbestos have not been met by home production, the latter has resulted in imports being diminished. Before the war the importation of asbestos was about 15,000 tons per year, while the German production of asbestos was only about one-eighth of this amount. In addition to the above, a substitute material has been produced during the war, called "Deutsches Asbest." Various other substitutes have also been produced, the best results being obtained with good quality wool waste, but silk, cotton, and animal hair were also used. About 10 per cent. of chloride of magnesium was added, in order to reduce the inflammability.

German asbestos is not to be compared with Canadian

asbestos. The Thuringen fibre is short and cannot be spun, and the asbestos is therefore chiefly used for boards and for the making of heat insulators, engine packing, etc. German asbestos chiefly appears in asbestos earth as a mixture with ochre and sand. The winning of the asbestos is, on this account, very difficult.—*India Rubber Journal.*

Croakers

EDITOR'S NOTE: The following is taken from Benjamin Franklin's Autobiography and appeared to be worthy of printing, particularly at this time.

"There are croakers in every country, always boding its ruin. Such a one then lived in Philadelphia; a person of note, an elderly man, with a wise look and a very grave manner of speaking; his name was Samuel Mickle. This gentleman, a stranger to me, stopt one day at my door, and asked me if I was the young man who had lately opened a new printing-house. Being answered in the affirmative, he said he was sorry for me, because it was an expensive undertaking, and the expense would be lost; for Philadelphia was a sinking place, the people already half bankrupts, or near being so; all appearances to the contrary, such as new buildings and the rise of rents, being to his certain knowledge fallacious; for they were, in fact, among the things that would soon ruin us. And he gave me such a detail of misfortunes now existing, or that were soon to exist, that he left me half melancholy. Had I known him before I engaged in this business, probably I never should have done it. This man continued to live in this decaying place, and to declaim in the same strain, refusing for many years to buy a house there, because all was going to destruction; and at last I had the pleasure of seeing him give five times as much for one as he might have bought it for when he first began his croaking."

BENJAMIN FRANKLIN.

Autobiography pp 103, 104--G. P. Putnam's & Sons Edition

AMERICAN ASBESTOS COMPANY

Manufacturers of
Asbestos Textiles

NORRISTOWN, PA., U. S. A.

Headquarters for
YARNS, CLOTH, TAPES, FIBRES, BRAKE LININGS AND TEXTILES GENERALLY

Contractors and Distributors Page

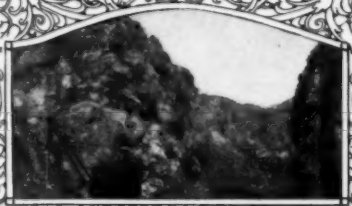
The pipe covering contractor has a unique and delicate problem in recommending the most advantageous lines for sale. In this he renders his best service to his customers. It means that a contractor must know his job—which presupposes knowing his products and what they will do under varying conditions. A contract taken for the profit of the business serves only a selfish motive and is usually the last one received from that source. Unless the contractor can fit his material to the conditions encountered, to the greatest advantage of the customer, he has failed in developing a permanent client.

Contractors should forecast sales tendencies in their territory. Charts should be graphed diagrammatically from month to month and from year to year comparing volume of business in each specific line. In case sales of any specific product are found to be falling off without suitable reason therefor, an investigation is due. Steady accumulation in volume of business in all lines is indispensable to your business life. This your sources of supply have a right to demand.

The means of sales stimulus rests largely with the contractor. The manufacturer cannot do it all, he functions mainly in a general way. Who better knows local conditions than the distributor's organization? He knows the needs and should know how best to supply them. This may be done by sales service, by catchy advertising or by gradual education of clientele.

Increasing the appeal of the product is another function of the contractor. The efficiency, the adaptability, the endurance or life of the product and the "knock" of the competitor are all objections which must be removed before the contract is signed. "Know thy product" is as fundamental philosophy in the business world as was "Know Thyself" to the great Grecian teacher Pythagoras.

"Launch out into the deep" insulation problems and PROVE the conservation and saving of fuel effected. Everybody, except the idiotic, will listen when you tell them how to save dollars and cents.



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Mines: Black Lake, Que.

Miners of
Crudes and Spinning Fibres
Specializing in Shingle Stocks

Controlling
Union Asbestos Mines
Southwark Mines
Imperial Asbestos Mines
Black Lake Chrome Mines
Coleraine Chrome Mines

Best 85% Magnesia

is made with

BLUE ASBESTOS

The Magnesia Association of America, on page 10 of their latest booklet, "Defend Your Steam," say—

1. The following table showed the *heat loss* from a pipe lagged with various materials each 1½" thick, with steam at 400 degrees F., and an outside temperature of 68 degrees F.:

2. MATERIAL.

	B. T. U's per sq. ft. per hr.
MAGNESIA	118
BLUE ASBESTOS	121
MICA (best only)	123
WHITE ASBESTOS	126
PLASTICS, ETC. (best)	133
PLASTIC, ETC. (inferior)	143

Therefore, Blue Asbestos is more efficient for insulation than White Asbestos. It also gives increased strength to the finished product and costs no more than White Asbestos.

We specialize in preparing Blue Asbestos.

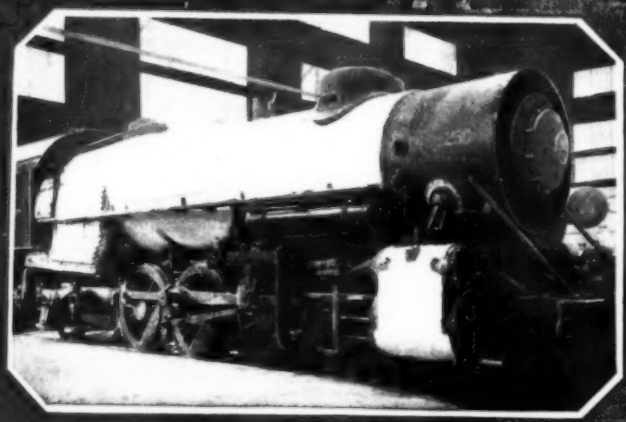
ASBESTOS LIMITED

8 WEST 40TH STREET, NEW YORK CITY, N. Y.

Mines, Griqualand, South Africa

Associated with

Cape Asbestos Co., Ltd., London, England



Asbestos Mines Ltd.

Mine at
East Broughton, Que.

Mining all grades
of Asbestos Fibre

Head Office, Jacobs Bldg
Montreal, Canada.

News from Mining Centers

Arizona:

The mining activity has been still further decreased in the Globe district and the Arizona Asbestos Association, controlled by the H. W. Johns-Manville Company, has only enough men working to keep the mines operating, without any view to pushing production.

The development work done of late at the Regal Mine has opened up further considerable quantities of Asbestos, proving the remarkable continuity of the asbestos bearing strata. Several veins of No. 1 Crude, two inches in length, show a continuity of several hundred feet without the slightest break. There are altogether, seven horizontal zones of asbestos bearing serpentine and limestone in the Regal Mine, separated by one hundred to one hundred and fifty feet of barren limestone or diorite or other rocks. Only one zone is being worked at the present time, this one showing in all workings two strata of asbestos bearing rock from 6 in. to 2½ ft. wide and separated only by about 4½ ft. of barren limestone.

Two small mines operated by local people employ less than a dozen men each and ship small quantities of Asbestos to the Pacific Coast.

The Apache Exploration Company has started development work in the Indian Reservation and the showing so far is quite encouraging.

New prospects have been opened up in the Indian Reservation across the Salt River from the Regal Mine by two prospectors, who have assumed, correctly, that a deposit like that found in the Regal Mine would probably find its continuation across the Salt River, since the formation is virtually the same. The difficulty of transportation presents itself, however, as the deposit can be reached only in a round-about way unless the River is crossed. It would appear necessary to erect aerial tramways in order to develop these properties and obtain any great production.

Africa.

Important discoveries of reasonably good Chrysotile Asbestos in the Nkandhla district of Zululand were reported

White Chrysotile.

The Victoria District Industries, Ltd.

Fort Victoria,
Southern Rhodesia.

Are Mine Owners, operators, and dealers.

Now open to consider "forward contracts."

Blue Crocidolite
White Tremolite
Brown Amosite

African Base Metals Export Co., Ltd.

Kearsney Buildings,
Durban, Natal.

Are Mine Owners, operators and dealers. Ready to consider prompt and forward contracts for several grades.

CABLES:—Both companies use Broomhall's Imperial Combination, and Bentley's Codes, and will respond promptly to cabled enquiries.

this month, also extremely large deposits of Tremolite in the Eshowe district, Zululand.

The Isitilo (Chrysotile) mine, near the Tugela River in Zululand with four adjoining claims, were expected to change hands this month for about £3,500 but after inspection by an engineer the deal has apparently fallen through.

Twelve claims were pegged last month (for a Capetown Syndicate) in the Klip River Native Reserve on the Mazebeke River (Tremolite).

Chrysotile claims are now being offered for sale at a low price at Tugela River and near Krantzkop, Natal.

There is considerable activity in the Crocidolite areas of Griqualand West and Bechuanaland.

As illustrative of Rhodesia's Asbestos Output, we quote figures taken from the South African Mining and Engineering Journal giving the production for the month of October 1920:

	Tons	Value
Bulawayo District—		
Birthday A. and Birthday B. Willoughby's Cons. Co., Ltd.	241.21	£3,813 2 5
Nil Desperandum (African Asb. Mining Co., Ltd.)	248.35	4,967 0 0
Shabanie (R. & General Asb. Corp., Ltd.)	281.04	7,025 18 3
Serpentine (African Asbestos Mining Co., Ltd.)	8.00	120 0 0
Victoria District—		
Balmain (African Asb. Mining Co., Ltd.)	97.75	2,443 15 0
Gath's (R. & General Asb. Corp., Ltd.)	379.82	9,495 10 0
King Asbestos (Rhod.), Ltd...	804.00	5,128 10 0
	2,060.17	£32,993 15 8

The total of Rhodesia's asbestos production up to December 1920 is given as 50,576.21 tons, valued at £1,235,457.

Dominion Distribution

of Asbestos Products and Mechanical Rubber Goods

Covers the

Industrial, Marine, Mill, Railroad, Mine, Automobile Trades

throughout the United States and every country in the civilized world.

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Baltimore	Los Angeles	San Francisco
Cincinnati	Norfolk	Seattle
Detroit	Philadelphia	St. Louis
	Pittsburgh	

The Hague, Holland

Use Of Asbestos In Electric Lifting Magnet

By R. L. Gregory, E. E.,
Interlake Pulp & Paper Co., Appleton, Wis.

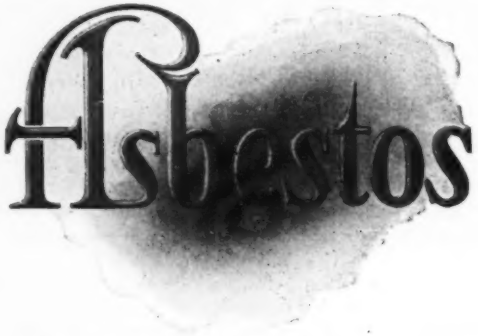
Industrial conditions the world over are continually undergoing changes. The predominating thought and spirit which underlies this constant changing is greater efficiency which may be said to apply to the whole arena of industrial development. In this transformation, there is just one more evidence that Asbestos is playing an important part.

The modern Lifting Magnet owes a debt of gratitude to Asbestos for its very existence because without it the construction, use and efficiency of this modern labor saving machine would have been impossible. From the standpoint of the relation of Asbestos to Electrical equipment, probably no example in recent years so well reveals the indispensable value of Asbestos in this great field.

The principal parts of the lifting magnet are the two poles—one composed of the steel shell which forms the magnetic outer casing and the other composed of coils. These coils consist of a number of ampere turns of wire and the more of these turns which can be enclosed in a minimum space the more current is acquired and, consequently, the greater the lifting power of the magnet. As the electrical current thru the coils is increased so does the power of the magnet increase. Naturally the greater the current the more heat generated which must be allowed to escape. This heat suppression and elimination is effected by Asbestos.

In manufacturing these coils the big problem is to get the maximum ampere turns of wire in the smallest space. The most feasible and efficient method of doing this is to use copper ribbon and to thoroly insulate each individual turn by the use of Asbestos ribbon. The best thermal as well as electrical insulator known is Asbestos, hence the use of Asbestos ribbon for this purpose.

In winding these coils a steel spool is used as a core around which is wound a few layers of high grade Asbestos ribbon. Over this insulation is wound alternate layers of copper and Asbestos ribbon, continuously, each feeding



SPINNING FIBRES
OF
Highest Grade

Edward H. Garcin & Co. Inc.
1819 Broadway
NEW YORK

BRANCH
MERCER STREET
Long Acre, W. C. 2
LONDON

onto the core from separate reels. When the coil has reached its proper size, the lead cables which are run into the terminal block are tapped on to the Asbestos insulated copper ribbon and placed in the steel casing forming the other pole of the magnet.

The coil must then be insulated from the frame. This is accomplished by the use of sheets of Asbestos paper. The lead wires are fastened to the stud bolts of the terminal block composed of a high grade of Asbestos board.

Since the resistance of copper increases with the rise of temperature, the coils are thoroly dried before being slipped into the steel casing. When thus placed in the frame work, the whole interior is impregnated with a fire proof liquid insulating compound which is composed of considerable Asbestos composition. The whole is then placed under pressure to force the Asbestos compound into all the air recesses. Seventy-five per cent of all troubles with electric magnets are due to shorts or grounds caused by imperfect impregnation admitting moisture. Here, Asbestos functions at its best.

It should be noted that Asbestos in three separate and distinct forms—Asbestos ribbon, Asbestos paper and board, and Asbestos impregnating compound—is used in the construction of the lifting magnet.

Thousands of tons of iron and steel are moved daily by this electric lifting magnet—Under test this machine has substituted for the manual labor of fifty men in the same period of time saving thousands of dollars annually for the metal industries at a maintenance cost of from 1 to 1½%. And it was Asbestos that furnished the insulating and impregnating compounds without which this valuable machine would have been impossible.

FOR SALE—I can offer for sale an undivided one half interest in the Arizona mines known as the Asbestos Association mines at Globe. These mines have produced more than three million dollars worth of asbestos. The Johns-Manville Company are taking the entire output. Address FRED PATEE, 1014 South Oak St., Casper, Wyoming.

FOR SALE—I have one claim of 20 acres and fraction that shows good quality of spinning fibre in an entirely new location where asbestos has not been known before. It is the same quality as that of the best Arizona fibre and is undoubtedly the same vein, tho not in Arizona. It may develop an entirely new field as big as the Arizona field. Address FRED PATEE, 1014 South Oak St., Casper, Wyoming.

NATIONAL MAGNESIA MANUFACTURING COMPANY

Manufacturers of

"85% Magnesia" Pipe

and

Boiler Coverings

Locomotive Lagging

544 Market Street

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U. S. A.

Cable Address, "Magnesia, San Francisco"

Russia--The Land of Unfulfilled Promise

It has been our great privilege recently to be in touch, by correspondence, with Stanislas Littauer, a Mining Engineer and Russian refugee. Mr. Littauer is now living in New York City, having been in this country only a few months.

Being interested in Russia, as the Land of Unfulfilled Promise so far as this Industry is concerned, we asked Mr. Littauer for information on Asbestos operations in Russia as he knew them, and are passing along to our readers the several interesting facts given.

The asbestos occurrences in Russia were known from the year 1720, during the reign of Peter the Great. In the Neivyansky district of the Ural mountains, a factory was organized for the preparation of asbestos lining. This exploitation stopped very soon for lack of a good market. A sample prepared in this factory is kept in the mining museum in Petrograd. Renewed development of this same deposit was begun about twenty-five years after the beginning of the asbestos development in Canada.

The Russian Asbestos Mines are found chiefly in four districts in the Urals: Bajenovsky, Neivyansky, Alapayevsky and Ostaninsky. The total production of the Rajenovsky district in 1913 was aboout 80% of all Russia.

Ural Asbestos gives a thin, elastic and strong fibre, and is said to withstand the effects of acid better than Canadian. With the present equipment and existing methods of exploitation (speaking now as before the War) the maximum output in the Urals and in Siberia, is about 50,000 tons annually.

Manual labor is used in the mining operations and the greater part of the material is produced in the spring of the year, making the industry a seasonable one. During the month of May as many as 28,000 workers have been working in the mines, this as against about 3,200 employed in Canada. The annual production per man in Canada is estimated at 41.7 metrical tons, but in Russia the figure is but 3 tons.

A comparison of freight rates before the War gives

good reason for the slow growth of the Russian asbestos industry. Canada could ship Asbestos to London for a little less than Russia could ship it to one of the Baltic ports, and by the time the ocean freight to London or Hamburg was added, the freight paid by Russia was, when compared with that stood by Canada, exorbitant.

The production of asbestos goods is still in its infancy in Russia. In 1913 only 700 tons of asbestos millboard were produced, and but 15 tons of various other asbestos materials. Practically all this material was exported to foreign countries, most of it thru Germany.

Russia undoubtedly has great asbestos resources, and if she ever succeeds in establishing a stable government, will open up a big field of high quality material which will be eagerly sought after, particularly if Canadian production continues to fall short of public demand.

Saved by His Asbestos Suit

The movies owe to an asbestos suit the preservation of their famous comedian, Charlie Chaplin.

In Chaplin's new picture "Vanity Fair," the funniest of all funny scenes was to appear. Chaplin takes a dual role in the picture, first appearing as a tramp and next as a "swell." Dressed for the "swell's" part, he was to trip down a hotel hallway (built for the purpose in the movie studios at Hollywood, California) and the flame from an acetylene blow torch was to singe him, making him give one of his famous funny little hops. The asbestos undergarment which he wore would protect him against any real hurt from the flame.

Unfortunately, Chaplin in some manner stumbled against the torch and immediately was on fire from head to foot. The asbestos undergarment protected the upper part of his body and together with the prompt action of the movie men, who wrapped him in wet blankets, saved his life.

Hobdell, Way & Co.

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LONDON, ENGLAND

RHODESIAN CRUDE ASBESTOS

CAPE BLUE CRUDE ASBESTOS

Address Enquiries to

W. D. CRUMPTON & CO.

Special Representatives

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New York City - New York

EVERYTHING IN ASBESTOS

You can get service from Carey on crude asbestos, asbestos paper, asbestos wick, millboard, insulating blocks or any other form suitable to your manufacturing purposes.

You can get scientific insulation involving wool felt, argentum, asbestos and 85% Magnesia—whatever your conditions call for. Why not discuss your needs with us now?

THE PHILIP CAREY COMPANY

Wayne Avenue, Lockland
Cincinnati, OHIO

Carey
ASBESTOS & ASPHALT PRODUCTS
85% MAGNESIA

Follies of Government

Do you wish to make friends and partisans for a very bad man? Then subject him to unusual punishments. Do you wish to give to any particular thing a priceless sort of advertising? Then go about the country whispering about it. Warn the people against it. Suppress it. Cry its name and demand that it be kept forever out of sight as something not tolerable to human eyes. Automatically you will create the Will to See and the Will to Experience in all the multitudes.

Curiosity is a human characteristic that becomes more definite wherever popular education is progressive. The campaigners for righteousness never seem to realize this. They constantly incite innumerable people to do things by ordering them to do otherwise.

Mr. Eastman, poet and parlor revolutionary, had an audience limited to Greenwich Village before Postmaster General Burleson shut his publication from the mails. Then everybody became eager to hear what Mr. Eastman had to say. Victor Berger's Milwaukee paper was without prestige or reputation, the only Socialist daily in New York was a thin voice of protest, until Burleson introduced each to the world by the foolish and tyrannical edict that barred them from mail service to which they were entitled. The Will to See was established.

If the radicals wish to give honor where honor is due, if they have in them a desire to recognize exalted service done in their cause, they ought to put up a statue of Mr. Burleson and a statue of Mr. Palmer. For Postmaster General Hays very promptly removed the ban from the publications which Burleson attempted to suppress by the methods of the Prussians. And the names of these journals are being printed on front pages all over the country.

The makers of whiskey have some reasons to regard Mr. Volstead not as an enemy, but as a valiant friend. At no time in the history of the world were strong drinks so

Asbestos Corporation of Canada, Limited

The Largest Producers of Raw Asbestos in the World

CRUDES
SPINNING FIBRES
SHINGLE STOCKS
PAPER STOCKS

Mines

Kings Mines, Thetford Mines, Quebec
Beaver Mines, " " "
B. C. Mines, Black Lake, "
Fraser Mines, E. Broughton, "

Head Office

260 St. James St., Montreal

General Office

THETFORD MINES
Quebec, Canada

widely advertised as they were in the dry laws and the debate that preceded their enactment. One cannot but marvel at the ignorance of human psychology revealed daily by men who make the laws. Did Volstead and his friends know that there were vast areas of the United States in which whiskey was hardly known, that half of the rising generation in some sections of the West had never seen a saloon and never experienced a desire to taste alcoholic liquor of any sort? Did they know that Americans themselves were gradually and voluntarily putting whiskey out of fashion and that all alcoholic beverages were drifting to the limbo of vanished things?

Apparently they didn't care. They pushed strong drink into the foreground. They made people think and wonder about it who had never wondered about it before. They put whiskey on the map, into the news, into the thoughts of young men and women who, without them, would have thought of whiskey as a peculiar substance consumed by undesirable persons of doubtful character. They advertised whiskey, and by putting a ban upon it they aroused perverse desires where no desire existed before. Moonshining, home-brewing, the illicit liquor traffic in places like Kansas and the obvious eagerness of the youth of the times to see for themselves what all the hubbub is about, indicate merely one of the psychological consequences of effectual advertising.

Ultimately the dry laws may operate. We may have legal prohibition as a realistic fact throughout the United States. But the good work will be accomplished in spite of Mr. Volstead rather than because of his aid. People will be interested in anything that is widely talked about, no matter what it may be. A good rule for statesmen might be this: Don't try to suppress anything, but tell the people the truth about it and they will suppress it in their own good time.

Reprinted from Philadelphia Public Ledger, Issue of June 1, 1921

CARD CLOTHING

is one of the most important accessories in preparing your asbestos.

Have you tried our special woven foundation that combines exceptional strength and durability?

The mills using it say it is far superior to any they have ever had for carding asbestos.

HOWARD BROS. MFG. CO.

Manufacturers of Card Clothing since 1866

44-46 VINE ST.

Worcester, Mass.

U. S. A.

Imports and Exports of Asbestos

Imports of Asbestos, Unmanufactured.

	March 1921		March 1920.	
From China	1 ton	$ 758		
Japan	1 ton	1,239	89 tons	$30,000
Australia	–	8		
England			60 tons	7,877
Br. S. Africa	75 tons	12,536	143 tons	48,815
Portuguese Africa			67 tons	35,963
	77	14,541	359 tons	122,655

Imports from Canada during March 1921 amounted to 4,458 tons at a value of $275,869.

As against the above, 63 tons of Asbestos Ore were exported during March of this year at a value of $23,900, which was divided as follows:

Germany	34 tons	$21,200
France	29 tons	2,700

Imports of Manufactured Asbestos Goods for March of the two years show the following comparisons:

	March 1921	March 1920
From Belgium	$ 671	
Germany	7,024	$ 1,956
Italy	3,769	1,131
Switzerland	155	4,442
England	15,909	30,903
	27,528	38,412

Exports of Manufactured Asbestos Goods for March were:

1921 - - - $263,720
1920 - - - $190,372

some of the most interesting figures being

	March 1921	March 1920
Germany	$26,516	
France	5,455	$ 7,472
Mexico	116,428	30,784
Argentina	17,377	5,364

England	3,734	10,239
Italy	362	1,999
Spain	6,730	30
Sweden	1,895	3,290

Conditions in Various Markets

Wire.

The Standard Underground Cable Company makes the following report on the wire market:

Buying of copper is light and the tone of the market is easy. Nevertheless refined copper has advanced one quarter to one-half cent per pound in the last month, but first hands are holding rather firmly at thirteen and one-half cents for nearby positions, doubtless reflecting their confidence that the drastic curtailment in production at the mines and refineries will soon make itself felt in higher prices and freer buying. Business in brass and bronze continues moderate altho prices are at an unusually low level.

Bands.

The Ritter Can & Specialty Company of Philadelphia, in commenting on the market situation as it concerns pipe covering bands, says:

The tin plate market situation is about the same as last month. Prices are not stable and everyone is waiting for July 1st when it is expected that the present market price will either be stabilized or a reduction in price of tin plate will be had.

Advise users of bands to purchase only for immediate needs, as July 1st should bring a standard price for the rest of the year.

Asbestos is found in fissures of rock and it is believed that, when the rock was forming and still hot, water penetrated the fissures, widened them and dissolved some of the silica and magnesia. On drying, these crystallized as a hydrated silicate of magnesia, forming threadlike crystals building up from opposite walls of the fissure and meeting in the middle.

ASBESTOS FIBRE

FOR THE MANUFACTURE OF

Asbestos Millboard
Asbestos Paper
High Temperature Cements
Pipe Coverings
Asbestos Shingles and Lumber
Insulating Cements
Fibrous Paints
Filtration Packings
Roofing Cements

THE QUEBEC ASBESTOS CORPORATION

Office and Mines

East Broughton, Province of Quebec
Canada

NEWS OF GENERAL INTEREST

The automotive industry in the United States provides work for 930,000 persons, with an estimated annual earning of more than $747,000,000.

The Baldwin Locomotive Works recently closed a contract with the Atchison, Topeka & Santa Fe Railroad for 50 locomotives, valued at about $3,500,000.

Export demand for Motor cars of American make is reported more pronounced than ever in the history of the business.

A boom in home building has struck New York, due to the tax exemption ordinance recently adopted. Plans filed in the first three months of this year show an increase of 61 per cent over the same period in 1920.

Misbranded, misrepresented or falsely described articles offered for sale will be held illegal, if a law introduced by Congressman Rogers, of Massachusetts is enacted. The bill provides that an article shall be considered misrepresented when offered for sale under the name of another or similar article, or when inserted in package replacing all or part of original material, or when packages are not correctly labeled as to weight, measure, quality, etc., or when false, fraudulent or misleading statements are published or circulated in advertisements or otherwise.

The bill is said in no wise to conflict with other laws of somewhat similar nature and the author of the measure is reasonably assured of its passing.

On May 28th the Ford Motor Company at their Highland Park factory turned out their 5,000,000th car. It will be placed in the Ford Museum in Detroit alongside the original Ford Car that popped and sputtered uncertainly thru the streets of Detroit back in the nineties. At an average cost of $500 each, the 5,000,000 cars would represent a sale value of $2,500,000,000.

It is said to be only a matter of months until the Ford Motor Company will manufacture in its own plants every part and product used in the manufacture of Ford cars, trucks, tractors and motor cars. By autumn it is expected that production of leather, celluloid, glass, cloth, steel, coal tar products, paints and other products will be under way.

Reports of mercantile failures prove quite conclusively what a foolish general system of business is followed by many American concerns. In January 1920, 572 failures with liabilities of seven million dollars; in January 1921, 1900 failures with liabilities of *seventy-seven* million dollars. Over expansion and lack of foresight.

ASBESTOS

Bennett-Martin
Asbestos and
Chrome Mines
LIMITED

Head Office

Thetford Mines, P. Q.
Canada

General Sales Office

220 Broadway, New York

Mines Located at

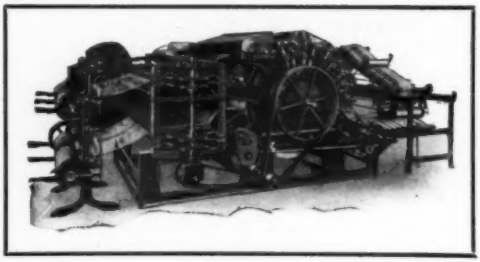
Thetford Mines and Vimy Ridge

When you require

Asbestos Machinery

you should think of

"SMITH & FURBUSH"



We have built practically all the yarn-spinning equipment for Asbestos in this country.

Circulars and further particulars on request.

SMITH & FURBUSH MACHINE CO.

Philadelphia **Penna.**

NEWS OF THE INDUSTRY

The South African Mining and Engineering Journal of December 1920 issue, contains some wonderfully interesting information about the Rhodesian Asbestos Deposits, the capitalization and personnel of the Companies engaged in this Industry in Rhodesia. Copies of this journal are on file in our office and may be examined by anyone interested.

New England newspapers announce that the Asbestos Wood Company of Nashua, N. H., a Johns-Manville subsidiary, is to construct plant additions to cost $250,000.

The new plant will manufacture corrugated asbestos wood, and when added to the present plant the layout will be notably large. The city of Nashua has exempted the new plant from taxation for a period of ten years.

J. E. Triganne, American Sales Agent for the Asbestos Corporation of Canada, visited Philadelphia and vicinity one day last month and favored this office with a call. We are always glad to see his smiling face.

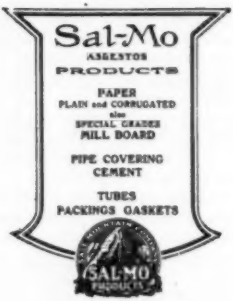
George R. Sutton, Director of the Asbestos Slate & Sheet Mfg. Co., Ltd., and of James Hardie & Co., Ltd., both of Sydney, Australia, is traveling in America and called at this office last month.

The Staybestos Manufacturing Company of Germantown, Philadelphia, has changed its location to Germantown Avenue & Berkley Streets, Germantown. They were formerly located at 5518-36 Lena Street.

R. W. Potter, President of the H. F. Watson Company, recently enjoyed a ten days fishing trip in the wilds of Canada.

The article appearing on page 30 of May ASBESTOS concerning the Hauck Preheating System, neglected to state that the Asbestos Lining used in this apparatus, is ¼ inch thick Asbestos Millboard.

The tariff schedule proposed by the Asbestos Industry and favorably considered by the House Ways and Means Committee, is the subject of very serious attacks by English manufacturers. Page 19 of the May 21st issue of the India Rubber Journal contains a number of observations made by Mr. J. Alfred Fisher, Chairman of the Board of Bell's United Asbestos Company, Limited, London. It is always interesting to note what serious differences of opinion are brought out whenever the question of tariff is proposed.



NOTICE

On June 15th we moved our General Offices into the Marquette Building 140 So. Dearborn Street Chicago

Inquiries receive prompt and courteous attention

Sall Mountain COMPANY

Maquette Bldg., 140 S. Dearborn St.
CHICAGO

NEW YORK CITY 141 W. 20th. St. — **Scranton, Pa.** — **BOSTON, MASS.** 268 State St.

ASBESTOS

The Quinley Magnesia Company, 306 Federal Bldg., Youngstown, O., has been recently incorporated, and expects to start production of Magnesia Carbonate and Calcined and Block Magnesia about July 1st, later going into the manufacture of Locomotive Lagging and Pipe Covering. J. C. Quinley, formerly consulting engineer for the Johns-Manville Company, is President of the Company, and Louis A. Kirtland (secretary of the Youngstown Securities Company), Secretary.

Bell's United Asbestos Company, Limited, of London, England, report net profit on 1920 operations of £64,670.

In the report of the Managing Director, it is stated that business during the early part of 1920 was excellent but that a decided reaction occurred in the last half of the year, orders being very scarce.

Extensions of the Harefield plant are nearly completed and, while at the moment the business is not fully active, the financial position of the Company is strong and the future promises well.

Mr. J. Alfred Fisher, Chairman of the Board of Directors is now visiting the United States and no doubt many of our readers will extend to him the hand of welcome and good fellowship.

E. M. Rogers, distributor for Asbestos and Magnesia materials in Texas, will in future be known as Rogers Asbestos Company. The change is due to expansion of the business, necessitating expansion in the organization. The Rogers Asbestos Company operate two offices, one at 519-21 Beatty Building, Houston, and the other at 804 Sumpter Building, Dallas, Texas.

The Asbestos & Rubber Works of America have recently added a Gasket Department to their Boston Branch. Installation of machinery has just been completed and it is said to be one of the most modern and up-to-date plants of its kind in New England.

F. R. Anderson, Vice President and Treasurer of the Sall Mountain Company, Chicago, is making an entensive trip along the Pacific Coast.

Our readers will be interested in seeing in this issue the advertisement of the Allbestos Corporation, which appears on page 11.

We were called on the telephone the other day by a gentleman (name unknown) who asked us the name of a new asbestos firm located at 10th & Chestnut Streets, or near that location, in Philadelphia. We were unable to supply the information and all subsequent efforts to secure it have accomplished

nothing. If any one of our readers knows of an asbestos company at or near that location we should be glad to be advised, so that the company may receive a copy of "ASBESTOS."

H. W. Edmondson, 465 W. 159th Street, New York City, has returned from an extended trip to Old Mexico, New Mexico and Arizona, and is now in Vermont with the Asbestos Corporation of America, directing and installing the fiberizing and grading equipment of their new plant.

S. L. Evans, Columbus representative of the Clark-Fisher Company, is receiving congratulations on the arrival of a brand new baby girl.

The Sall Mountain Company of Chicago, on June 10th, moved its offices to Marquette Building, 140 S. Dearborn Street. Readers are requested to make note of the new address.

At the Annual Meeting of the Asbestos Mine Operators' Association held on May 12th, the following officers were elected: President, Major-General Sir John W. Carson; Vice President, W. G. Ross; Secretary-Treasurer, G. D. Oulster.

George M. Clark, President of the Clark-Fisher Company, Cleveland, Ohio, started June 1st on an extended business trip to include the cities of Chicago, St. Louis and Kansas City.

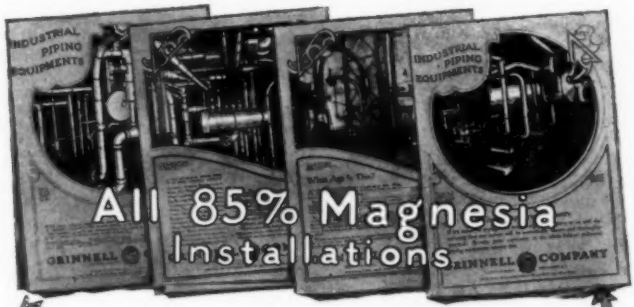
"Asbestos in 1919" published by the U. S. Geological Survey and written by J. S. Diller, the well recognized authority on Asbestos, says: "One of the most interesting and useful features developed recently in the asbestos industry is the publication of a monthly magazine called "ASBESTOS." Altho of small size, it appears to be of large scope and may well promote the welfare of the whole industry."

This kindly reference is highly appreciated by the Editor.

George C. Williamson of the National Magnesia Manufacturing Company, resigned from that company on May 14th, and will henceforth devote his entire time to the business of the W-K Minerals Company of which he is President. The W-K Minerals Company operates a large, high grade Magnesite deposit in the Red Mountain district of California.

We are glad to be able to advise our readers of a great improvement in the condition of Sir John W. Carson, President Consolidated Asbestos Limited, who was recently stricken with paralysis. Sir John's speech has now returned as well as certain muscle actions of his right hand.

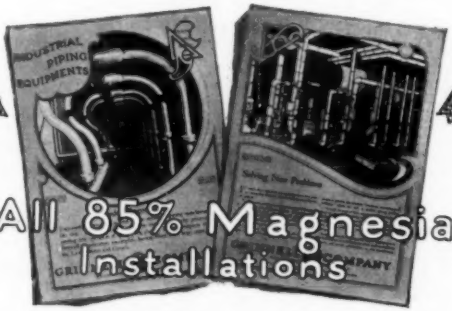
Quite a bit of information concerning the Asbestos Industry in the United States, is given in a pamphlet issued on May 14, 1921, by the United States Geological Survey, Washington,



Better Advertising Than Any We Could Write

Here are shown a number of interesting piping equipments installed by the Grinnell Company of Providence, R. I. Specializing in insulation problems, the Grinnell Company has elected to use a covering that can be depended on to give maximum results year after year. Its practice is a more impressive advertisement for 85 per cent. Magnesia Pipe and Boiler Covering than anything we could write.

MAGNESIA ASSOCIATION *of* AMERICA
721 Bulletin Bldg., Philadelphia, Penna.



EXECUTIVE COMMITTEE, Wm. A. Macan, *Chairman*

George D. Crabbs	The Philip Carey Co. -	Cincinnati, Ohio
Alvin M. Ehret	Ehret Magnesia Mfg. Co. -	Valley Forge, Pa.
J. R. Swift -	The Franklin Mfg. Co. - -	Franklin, Pa.
R.V. Mattison, Jr.	Keasbey & Mattison Co. - - -	Ambler, Pa.

D. C., under the title "Asbestos in 1919," written by J. S. Diller. One of the most interesting discussions is that concerning the reason for the existence in Arizona of two distinct grades of fibre (one harsh and splintery, the other soft and silky) in the same vein, without definitely visible boundary.

Readers can see this pamphlet at the office of "ASBESTOS," or can obtain a copy by writing the U. S. Geological Survey.

The average number of men employed in asbestos mining operations in the Province of Quebec during the year 1920 was 1,890, in milling operations 1,340, making a total of 3,230.

The plant of the Windsor Asbestos Company, Limited, at Coleraine is now in operation and can supply Asbestos Fibres, according to test. Samples can be examined at the office of ASBESTOS. Prices are also in our hands.

C. B. Jenkins, President of the General Asbestos & Rubber Company of Charleston, S. C., celebrates the anniversary of his birth on July 3rd. We extend to him our congratulations and very best wishes.

Dr. Richard V. Mattison, President The Keasbey & Mattison Company and other large and well known asbestos enterprises, was suddenly and seriously stricken on Tuesday, May 31st by an attack of appendicitis. He was taken to the Germantown Hospital, where an operation was performed by Dr. George Ross, and, as we go to press, reports are to the effect that he is improving slightly each day. His many friends will sincerely sympathize with the good Doctor and his family.

If any of our readers have copies of the July and September *1919* numbers, we would be glad to buy them at the regular back number price of 20c per copy. We have several requests for these numbers from persons who desire to bind Volume 1, and are unable to secure the first and third numbers.

W. A. Macan, Chairman of the Magnesia Association of America and Vice President Ehret Magnesia Manufacturing Company, has just completed a most interesting motor trip thru Lancaster Harrisburg, Carlisle, Chambersburg, Frederick, Harpers Ferry, Baltimore and return to Philadelphia. He reports having had a most informative, delightful trip, and with the exception of five to ten miles, the entire journey was made over splendid macadam roads.

S. Bateman, Co-Superintendent of the Black Lake Asbestos & Chrome Company, went thru an experience during the latter part of May which most of us would be glad to avoid. Mr. Bateman had drawn approximately $9,000 for payroll purposes, and was returning to the plant from the bank in an automobile

Consolidated Asbestos Limited

MINES AT

THETFORD MINES, QUEBEC, CANADA
ROBERTSONVILLE, QUEBEC, CANADA

Miners of all Grades
OF
ASBESTOS
CRUDE and
FIBRE

EXECUTIVE OFFICES

Dominion Express Building
145 St. James St.
Montreal, Canada

driven by Albert Harvey, when they were held up by two masked robbers, who started shooting, wounding Mr. Harvey, and at the same time demanding "Put up your hands." Mr. Bateman showed rare courage when, in raising his arm, he brought his revolver into play, hitting one of the robbers on the head, the other getting away.

Help quickly arrived, and the wounded man, a Russian, who had recently been discharged from the Black Lake Asbestos & Chrome Company after nearly ten years service, was taken to a doctor, and later to a hospital in Thetford, where he died. The coroner's jury exonerated Mr. Bateman of all blame bringing in a verdict of "self defense."

John Scharwath, President of the National Asbestos Manufacturing Company, Jersey City, is taking a prolonged and well deserved vacation, making the acquaintance of many distant points in the United States. It is probable that he will extend his travels to include a trip round the world.

N. Brackett, formerly manager of the Philadelphia office of the Dominion Asbestos and Rubber Corporation, has opened an office located at 108 Walnut Street, Philadelphia for the Crane Packing Company, and is serving them as manager. Mr. Brackett has a wide acquaintance among shipping men and will undoubtedly do a good business in his new connection.

P. Nicholls, technical expert on Heat Insulation, in the employ of the Franklin Manufacturing Company, was the recipient last week of a handsome gold watch and chain with pipe tool charm. The gift was presented to Mr. Nicholls by the Magnesia Association of America (of which his Company is a member) in appreciation of service rendered toward establishing scientific standards in connection with the standardization work of the Association, and bears a suitable inscription paying tribute thereto.

The mystery surrounding the explosion which wrecked the office and blew it up to avenge the prosecution of his friend, Mike has been cleared up by the confession of Frank Flori, of Howellville Pa. Flori says he placed three sticks of dynamite in the office and blew it up to avenge the prosecutio nof his friend, Mik Fazzari, who was sent to jail in February for stealing material from the plant. Flori has been committed to jail to answer at the June Criminal Court.

P. Swain, formerly employed in the Sales Department of the Franklin Manufacturing Company, has accepted a position as Associate Editor of POWER.

A very attractive, handy size blotter, featuring the Gotham National Bank Building, the new home of the Asbestos & Mineral Corporation, is now being distributed by that firm.

ELWOOD J. WILSON

Mining Engineer

76 CORTLANDT STREET
New York City

Asbestos Crude and Fibre for Sale

Thetford Crudes, Rhodesian Crudes
Rhodesian Carded Crudes
for immediate shipment, ex warehouse N. Y.

CHRYSOTILE ASBESTOS ONLY

Will Examine and Report on Asbestos Mines and Prospects Anywhere

Correspondence desired with Owners of Asbestos Mines with a view of Purchase

Afterthoughts

And now we have reached the end of another year, the second in the history of this little journal, and one which has been filled with many pleasant moments. In it we have made a host of new friends; have been commended and helped by old ones. We look forward to the coming year with the keenest anticipation, and hope to work out a number of plans which are at present in embryo, to make the magazine bigger and better than ever.

Many of our readers are planning to bind Volume two of ASBESTOS. Some in fact have asked us to have this work done for them. We are glad to perform this service and can offer bound volumes at a price of $5.00, we to furnish the magazines, or $3.00 if you send your copies to us. To these prices cost of postage should be added. The binding can be hadin almost any color—green has been adopted for our own reference copies. Orders should be sent in early as it takes several weeks to have the work done.

The magazine starting in July makes many subscriptions run out in June. Look for the little red label on your envelope, and if you find it there this month send in renewal without delay. You won't want to miss the July number as it will contain the last of the series of articles on Mining and Milling of Asbestos.

Recently readers of ASBESTOS have asked permission to reprint certain articles in their sales literature or elsewhere. Such permission we cheerfully grant, with the one stipulation that the origin of the material be stated. Just say: "Reprinted from ASBESTOS, Philadelphia." And might we hint that copies of the printed matter in which such reprints are made would be appreciated.

We think our readers will be particularly interested this month in the graph on page 13. The figures given are authoritative and the drawing has been carefully worked out. It is our purpose to show other graphs from time to time illustrating various facts, as a graph often visualizes facts which any number of words cannot adequately convey.

And we hope our readers will notice the several little improvements we have made in this June number. We will not point them out, leaving their discovery to your interest and ingenuity.

Our last word in this last number of Volume two is a reminder that suggestions are always welcome. We think we have said this before, but we want to say it again for we want *your* magazine to have in it the kind of material which will be helpful to *you*. How can we help you? Is there any particular subject which you would like us to cover? Let us know.

QUALITY USACO PACKINGS

United States Asbestos Company

General Office: Lancaster, Pa.

Mills at Manheim, Pa.

Manufacturers of asbestos yarns and fabrics, also packings and friction facings.

Sold exclusively to manufacturers of rubber goods, packings, and brake linings, and to distributors of asbestos materials on a quantity basis.

USACO

Branches

New York **Boston**

White Seal Asbestos Roofing

TRADE MARK

IMPERIAL BRAND

Black Seal Asbestos Roofing

These are all mineral products made to withstand the elements and give life time service.

Approved by the Board of Underwriters' for use in fire zones.

Highest quality Roofing manufactured.

First cost your only cost.

CONSTRUCTION

1. Pure Asbestos Impregnated Felt
2. Layer of Waterproof Asphalt Cement
3. Pure Asbestos Impregnated Felt
4. Layer of Waterproof Asphalt Cement
5. Pure Asbestos Impregnated Felt

H. F. WATSON CO.

Main Office and Factories

79 Milk St. Boston — **Erie, Pa.** — 319 N. Wells St. Chicago

Established 1897

Ehret Magnesia Mfg. Co.

Valley Forge - Pennsylvania

Manufacturers

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EHRET'S

85% Magnesia Pipe & Boiler Coverings

85% Magnesia Plastic

Powdered Carbonate of Magnesia

Plant and Executive Offices
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Branches—
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Representatives—In all principal cities

Ten Reasons Why He Succeeded

1. He kept up with the times.
2. He did not try to do everything himself.
3. He took time for exercise and relaxation.
4. He maintained efficiency by developing able help.
5. He did not permit system to run into red tape.
6. He did not practice cheese-paring economy.
7. He did the little things worth while.
8. He developed his capacity for large things by avoiding the pitfalls of detail.
9. He took frequent inventory of himself and his stock, *and, last but not least—*
10. He was a regular and consistent advertiser.

—From the Philadelphia Bulletin.

Robinson Press.
Hatboro, Pa